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ABSTRACT

This article focuses on the importance of school readiness to school success and long-term life success. Issues relating to school readiness include what constitutes readiness, types of fundamental knowledge, how children approach learning, children's mental and physical health, and how readiness is defined. The article first examines what is really meant by readiness and then discusses how readiness should be implemented, considering the serious issues associated with such implementation. It is suggested that readiness must be defined broadly, and relatedly, there must be broad and shared responsibility for its implementation. The chapter urges the acceptance of the National Education Goals Panel (NEGP) definition of readiness, and that readiness be the responsibility of families and an array of institutions including early care and education, family support, schools, and communities. Building on this discussion, policy recommendations are offered to be considered for inclusion in Healthy People 2010. These include: (1) giving more attention to children and the importance of the early years before school; (2) conceptualizing readiness as children's readiness, family readiness, school readiness, and community readiness; (3) generating adequate assessment systems for children, schools, and communities; and (4) considering children and families holistically. Contains over 80 references. (SD)

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Defining and Implementing School Readiness: Challenges for Families, Early Care and Education, and Schools

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There is widespread popular sentiment that readying young children for school is important not only to their school success but to their long-term life success. Such sentiment is not unfounded; confirming what has been recognized by parents and child development experts for years, new brain research indicates that the first years of life have important long-lasting effects on children's brain functioning and their overall development (Carnegie Task Force on Meeting the Needs of Young Children, 1994). This research, along with decades of work that has preceded it, points to the critical need for attending to children's early years—to providing them with a healthy start that readies them for school and later life.

Beyond broad agreement about the importance of readying children for school, the readiness waters are murky. First, there is little consensus on precisely what constitutes readiness. Is readiness simply the recitation of simple facts, numbers, shapes, and colors, or is it more fundamental? Does and should readiness include how children approach learning? Does and should it include children's health and mental health? How, indeed, do we define readiness?

Beyond such definitional ambiguity, there is a lack of clarity regarding how the nation should go about implementing readiness

and who should be responsible for doing so. Are parents responsible for their children's readiness? Should communities offer universal early care and education[1] services to children under age 5, as they do educational services to children over 5? Should parents be expected to pay for these services or are they a public responsibility? Are parents entitled to parenting education and family support services or should they remain services restricted to the few?

The purpose of this chapter is to explore these issues—to first examine what is really meant by readiness and then to discuss how readiness should be implemented, considering the serious issues associated with such implementation. Building on this discussion, we offer policy recommendations to be considered for inclusion in *Healthy People 2010*. We suggest that the two major themes of this chapter—defining and implementing readiness—are not unrelated; how we define readiness may affect who is responsible for its implementation, and conversely, who implements readiness may dramatically influence how it is defined. Our premise is that a narrow definition of readiness and a narrow construction of who is responsible for its implementation will yield youngsters and a society unprepared to meet each others' needs. Therefore, we suggest that readiness must be defined broadly, and relatedly, there must be broad and shared responsibility for its implementation. We urge the acceptance of the National Education Goals Panel (NEGP) definition of readiness and advocate that readiness be the responsibility of families and an array of institutions including early care and education, family support, schools, and communities.

Defining Readiness: What Does It Really Mean?

Historical Definitions of Readiness

Debated for decades, definitions of readiness vary both over time and within given periods of time. Historically, two major constructs—readiness for learning and readiness for school—have competed with each other and undergird much of the readiness confusion. Leading theorists in child development and learning

have defined *readiness for learning* as the average age at which individuals reach a level of development capable of learning specific material. When elaborating on this definition, theorists offer individual interpretations of the definition. For example, Gagne (1970) suggests that readiness for learning involves attentional set, motivation, and developmental status. Piaget (1970) focuses on the importance of the learner's internal forces—such as how children integrate new stimuli with previously acquired information. Bruner (1960) and colleagues attribute greater significance to external, environmental forces. But all share the belief that readiness for learning is intimately tied to developmental processes that evolve in fairly predictable ways. Indeed, children are truly born ready to learn.

Though conceptually confounded with readiness for learning, *readiness for school* is an entirely different construct. It is linked to children's knowledge at a moment in time of specific cognitive and linguistic skills, such as the ability to identify colors by name, or being able to copy a square. The more rigid construct of school readiness historically has most often been equated with reading readiness. It is also manifest in other subject areas that demand a fixed level of physical, intellectual, and social development sufficient to enable children to fulfill school requirements and to assimilate curriculum content.

These two constructs—readiness for learning and readiness for school—have given birth to a third, ***maturational readiness,*** which has evolved from the tension between the two. In line with the basic tenet of school readiness, maturational readiness expects children to attain a certain specified standard before entering school, yet like readiness to learn, it acknowledges individual variation. It recognizes that not all children will attain a common standard at the same time. Consequently, many maturationists advocate that children be retained from entering formal schooling until they are determined to be maturationally or developmentally ready.

A fourth construct, advanced by Vygotsky (1978), claims that children grow into the intellectual life around them and that their development is stimulated by learning. Consequently, rather than considering readiness as a gate, keeping the "unready" out of school, this construct opens the gates and says all should come because learning takes place within the context of social interactions. Vygotskians, therefore, support the notion that schools must

be ready for children, for all children, regardless of what cognitive factoids children do or do not possess.

A More Recent Definition

However accurate, these approaches have failed to yield a consensus on what constitutes child readiness. The lack of such consensus became publicly apparent in the early 1990s when the NEGP declared as the first national educational goal that by the year 2000, all children should start school ready to learn. Initial response to this goal was swift and critical: Early childhood educators claimed that children begin life ready to learn; evaluation specialists said that tools were not available to measure the goal; others noted that the very constructs that defined readiness were not delineated.

To address these concerns, the NEGP appointed a Technical Planning Group to forge a consensus regarding the definition of children's early learning and development. Building on past work, five dimensions were identified: physical health and motor development, social and emotional development, approaches toward learning, language usage, and general knowledge. To amplify these dimensions and thereby more precisely define readiness, 30 papers by nationally recognized scholars were commissioned, and based on their work and that of others, a synthesis document was prepared. The synthesis document was widely reviewed by over 500 researchers, practitioners, parents, and politicians before it was finalized (Kagan, Moore, & Bredekamp, 1995). It should be noted that none of the dimensions or their amplification presented in the synthesis was new; rather, the document represented a codification of what was already known regarding children's early learning and development.

More specifically, the first dimension addresses the physical well-being and motor development of children, conditions that are central to their entire learning experience. Physical well-being—physical development—includes children's overall rates of growth, levels of physical fitness, body physiology, and physical abilities such as gross and fine motor skills and sensorimotor skills. It also includes the context of development—the perinatal context, caregiving environment, and use of health care.

The second dimension relates to children's social development—the ability to form and sustain social relationships with both peers

and adults—and emotional development—how children express their own feelings and how they manifest sensitivity and empathy to the feelings of others. Patterns of emotion, for example, joy, fear, grief, or delight, result from children's interactions and help to shape a young child's self-concept. Emotional development also affects how children express their own feelings and how they manifest sensitivity and empathy to the feelings of others. Social development is the ability to form and sustain social relationships with peers and adults and encompasses variables such as cooperation, companionship, and support for others.

Approaches toward learning—the third dimension—is the least understood and least researched dimension. It includes both children's predispositions and learning styles. Predispositions such as gender, temperament, and cultural patterns and values are genetically and culturally embedded early on and influence the way a child both thinks about and acts on learning opportunities. Learning styles are the way that a child approaches the process of learning, for example, through openness, curiosity, initiative, imagination, or invention.

The fourth dimension focuses on language development, how a child acquires linguistic forms and procedures as well as rules and customs for expression and interpretation. Both verbal language and emerging literacy, two important components of language development for young children, are strongly dependent on children's experiences within their homes and communities. Verbal language comprises listening, speaking, and vocabulary use among other skills. Emerging literacy includes both extracting meaning from printed symbols as well as decoding words. It is important to note that previous definitions of language development have failed to account for how English proficiency is acquired by children whose primary language is not English. The NEGP document notes that when educators assess youngsters' cognitive and linguistic abilities, they must be aware of cultural and linguistic factors that influence the way children express themselves.

Finally, the fifth dimension—cognition and general knowledge—is the one most frequently associated with early development and learning. Although the public generally limits cognition and general knowledge dimension to social-conventional knowledge—such as the names for colors and numbers—in fact, this dimension is far more complex and involves all types of knowledge. For example,

it includes physical knowledge, which is the knowledge of objects in external reality, and logico-mathematical knowledge, which refers to the relationships created in the mind among objects, events, or people. Through the interaction of these three kinds of knowledge, children develop cognitive competencies, including problem solving, mathematical knowledge, social knowledge, and imagination. Often, children's cognitive competencies are a reflection of cultural preferences and patterns.

Caveats Associated With Defining Readiness

Although this document has been widely accepted, several major caveats characterize it and would—in all likelihood—characterize most efforts to define readiness. First, they are inextricably linked. The five dimensions—the very idea of readiness—must be considered as a totality to capture the complex interconnectedness of early development and learning. Second, the amount of information and the state of knowledge on each of the dimensions is not even. Consequently, some of the dimensions of readiness are more clearly delineated than others. Third, individual child performance is multidimensional, episodic, and highly variable across the dimensions. As a result, it is impossible to establish a threshold for readiness, above which children are deemed developmentally ready and below which they are deemed unready for school. Instead, the dimensions need to be considered as an attempt to amplify the range of variables associated with early development and learning. Fourth, conventional definitions of early development and learning have not attended to individual, cultural, and contextual variation. Rather, they have tended to focus on genetic and/or developmental variation, with the result that cultural and contextual differences have often been misinterpreted as deficiencies. Moreover, approaches to assessment that have been predicated on developmental variation in the absence of cultural and contextual variation have de facto ignored cultural competence and used majority-culture norms to measure competence. In contrast, the NEGP report attempted to recognize that individual, cultural, and contextual variables are critical to children's understanding of the world, how they process information, interpret experiences, and present themselves.

Finally, whether children attain healthy development on all of these dimensions is highly influenced by available family and community services and supports. Indeed, the report—as any definition of readiness should—emphasizes the importance of families and communities in shaping children's early experiences and encounters with their environments. The important role of communities in supporting children and in supporting parents in their own roles as nurturers and providers must be considered central to understanding readiness. In other words, readiness was conceptualized as not simply inherent to the child, but inherent to the community and society. As a result, the report called for increasing the commitment to children's well-being as a social imperative—one that is essential to the future well-being of the nation. Moreover, it noted that the healthy development of young children can only be achieved with the cooperation and support of societal institutions including government, corporate America, the media, schools, and families.

Adopting much of the thinking that characterized the NEGP work, this chapter—like the NEGP document—does not use the word *readiness* to refer to a specific set of skills or abilities demonstrated by children at a given point in time. Rather, we use readiness to suggest an overall condition of children, families, support institutions, and communities that promotes the healthy development and learning of young children. Readiness is not a finite product or state to be used to gauge or label the status of an individual child; rather, readiness herein connotes the overall state of the nation's commitment to its young children. As such, we now turn to discuss how various institutional players can and must adopt a renewed commitment to young children. We term this *implementing readiness*.

Implementing Readiness: The Role of Families and Family Support Programs

Without families who are ready to support and nurture their young children, youngsters' early learning and development will be thwarted. Families are not simply the cornerstone of life for the young child; they are the instruments through which children come to see, understand, and interpret their worlds. Families are the primary and most responsible agents who craft children's early development and learning; they are the very foundation on which

readiness is built. Acknowledging the importance of families to children's lives, a specific objective of the first education goal is that every parent will be a child's first teacher and devote time each day to helping his or her preschool child learn (Kagan et al., 1995). More generally, the objective suggests that parents and families must engage in behaviors that contribute to children's development. Recognizing that such parenting is not innate, but demands skills and resources, the objective calls for access to training and support that parents need to fulfill this responsibility. We turn to a discussion of the behaviors and attitudes that contribute to healthy development and then discuss the new family support movement as a means of fostering such behaviors.

Family Behaviors and Attitudes That Contribute to Children's Early Development and Learning

Research confirms the importance of families to children's development and school success (Moore, 1990; Powell, 1990, 1995). Compelling longitudinal research indicates that maternal attitudes and child-rearing attitudes and practices in the first years of life are linked to a child's subsequent performance in school. In a Stanford University study, measures of maternal attitudes and behavior correlated with child readiness at age 5 or 6 and later school achievement at age 12. The maternal measures—which included expectations of achievement, affective tone and style, maternal teaching and communication styles, strategies for controlling child behavior, and attributions of child success and failure in school—were a much stronger predictor of child outcomes than socioeconomic status, and the correlation between maternal variables and school achievement was not a function of maternal IQ (Hess, Holloway, Dickson, & Price, 1984). There is also evidence that the quality of the home environment—the level of parental support of early cognitive and social-emotional development—during the first years of life correlates with school achievement (Bradley & Caldwell, 1984). Parents who are supportive of their preschool-age children are likely to be supportive of their school-age children, although the family's influence in school achievement for older children may subside as the influences of school and peers take on a larger role (Powell, 1995).

Parental attitudes and behavior are intertwined with their daily interactions with their children. Therefore, it is difficult to isolate the most important parental influences on children's early development and learning (Powell, 1995). In fact, there does not seem to be one single parental attitude or action that predicts school readiness or achievement more than others. Rather, research points to a group of parental beliefs and practices that mesh to positively influence children's early development and learning (Powell, 1995):

- Parents with a constructivist perspective on development (who view development as a complex process that involves the child as an active contributor to his or her own development) promote children's cognitive outcomes.
- Parents who have an accurate understanding of their child's intellectual abilities create an environment that enhances their child's intellectual performance.
- The most effective parental teaching strategies are those that stimulate the child's own thinking and promote active verbal engagement in task, provided that this is appropriate to the child's developmental level.
- Attentive, warm, and nonrestrictive maternal behaviors during infancy and preschool years foster intellectual development.
- Direct control tactics in teaching and disciplinary situations are negatively related to school-related abilities, possibly because children learn that the capability to solve problems belongs primarily to the adult.
- Parents may create a positive environment for their children to acquire reading skills by providing access to reading and writing materials and limiting the amount of television they watch. The quantity and quality of parental reading to the child contributes to children's early literacy.

Although desirable, how prevalent are these behaviors among parents and families today? In reality, the pressures on families today are overwhelming as parents must balance their work and child-rearing responsibilities. Indeed, with over 60% of mothers in the workforce, almost half of those with children under 1 year of age, it is not surprising that two thirds of parents with children under 18 feel that they do not have enough time to spend with their children (Families and Work Institute, 1994). The limited time that parents and children have together makes how that time is spent all the more important.

Frequently used indexes of parenting include how often parents read to and actively engage in activities with their children. According to the National Center for Education Statistics, family members read to 78% of all preschoolers three or more times a week in 1993, up from 71% in 1991. About 41% of preschoolers are told stories several times per week and about 39% of preschoolers visit the library once per month. More than a third of 3- to 6-year-olds learn songs or music regularly from their parents, and one third engage in arts and crafts with their parents on a regular basis (Wright, Hausken, & West, 1994). Other studies suggest that parents spend very little instructional time with their young children. Survey data from the early 1980s found that 3- to 5-year-old children spent only 7 minutes per day reading or being read to, whereas they spent almost 2 hours watching television during the week and slightly more on weekends (Timmer, Eccles, & O'Brien, 1985).

Are there differences in the ways in which different parents spend time and engage in activities with their children? Research indicates that parents with more formal education spend more time reading to their children and watch less television than those with less education (Eccles, O'Brien, & Timmer, 1985-1986; Timmer et al., 1985; Wright et al., 1994). Some variability within socioeconomic groups regarding the amount of stimulating experiences children encounter in their home environments (Heath, 1983; Teale, 1986) has been found, with low-income families engaging their children in storybook reading less frequently than middle- and upper-income counterparts (Teale, 1986).

Employment may relate to how much time parents spend with their children. Although mothers who work outside the home spend less total time with their children, several studies suggest that employed mothers are more highly interactive with their young children than homemakers (Zaslow, Pedersen, Suwalsky, Cain, & Fivel, 1985). Working mothers spend an average of 11 minutes a day reading, conversing, or playing with their children during the week, and 30 minutes a day on weekends. Homemakers spend 30 minutes each day during the week, and 36 minutes a day on weekends. The time fathers spend with their children does not seem to change according to whether or not their spouse is in the workforce (Eccles et al., 1985-1986; Timmer et al., 1985).

Although these data suggest that there are very low levels of instructional exchanges between parents and young children,

there are opportunities to enhance parents' participation in their children's early education. Parents want to spend their precious time with their children in a manner that supports their early learning. In fact, there is evidence that parents are committed to and interested in promoting their children's growth and development (Powell, 1990), but lack the guidance or the resources to do so.

Engaging Parents and Families: A Case for Family Support

What do families need to strengthen their roles as their children's first teachers? Families need information and support. Today, a growing number of volumes on parenting and preparing children for school line bookstore shelves and close to a hundred parenting magazines are thriving. Parents are going on-line to get advice on child-rearing issues over the Internet, and more than 2 million parents have called one of the many helplines in the United States (Shore, 1994). Despite the use of reading material, media, and other information sources, parents still rely on friends and relatives, as well as on formal and informal interactions with professionals, to gather information on parenting. Indeed, helping professionals have been found to be more useful sources of parenting information than mass media sources (Crase, Carlson, & Kontos, 1981; Hughes & Durio, 1983; Keopke & Williams, 1989; Mullis & Mullis, 1983). Parenting education programs—home visiting programs and child-rearing classes—have become part of a burgeoning set of services.

Such programs form the basis for an emerging movement deemed "family support programs." These family support efforts provide emotional, informational, and instrumental supports to families as they confront the challenging task of raising their children. Family support began in the late 1970s as a grassroots movement, largely characterized by scattered programs where staff provided informal support services to parents with young children. Diverse and highly idiosyncratic, the programs existed independently of one another, although they shared a desire to serve entire families and to do so in a way that was nonjudgmental, highly inclusive of all family members, and preventive in orientation. During this early era, discrete programs proliferated, with few opportunities for linkage among them.

Scattered programs slowly became aware of one another and decided to come together to share their work, philosophies, and concerns. During this period, in the early to mid-1980s, meetings were held, organizations were formed, and the ideas that framed the individual programs were codified into a working set of principles: decentralized decision making, according power to the consumer, preventing problems before they occur, family inclusiveness, and voluntary participation. Once codified, these principles guided the development of many new programs and formed the basis for the emergence of family support to the public agenda.

As family support emerged as a set of principles, it became apparent that its ideas were not unique to these programs. Similar ideas were being discussed as part of reform efforts that were taking hold in other domains—business, education, consumer protection, and preventive and mental health care. In fact, the ideas that undergirded family support became popular and began to transcend "the programs originally designed to contain them" (Kagan & Weissbourd, 1994, p. 475). Family support became an approach not limited to discrete family support programs but one that could be adapted and infused into mainstream social institutions, including public schools, health care, and social services. And isolated institutions began to adopt a family support approach.

As family support burgeoned from programs to principles to an approach, its ideas have caught on. More and more, family support is finding its way into diverse facets of the American agenda. Family support has been manifest in legislation; it has been infused into corporate policies, striving to make business and industry more family supportive; and it has been embraced by many conventional social services bureaucracies. Already a movement, presently family support appears to be on the cusp of creating a new normative system of family support. Such a normative system suggests that family support will no longer be considered haphazard or unique; it will become what is normal, what prevails. Family support would become so enmeshed in the social fabric of this nation that it would not be regarded as a treatment or intervention, but as a condition of life (Garbarino & Kostelny, 1994). Today, it is estimated that some 2,500 family support programs exist, with federal funding supporting some of them. Moreover, family support principles characterize many more programs, institutions, and corporations.

As progress is made, the challenges to becoming a normative system reveal themselves. First and foremost among current issues in family support is quality. To date, there has been limited attention to defining quality for family support programs for several reasons. For the past decade, as noted earlier, efforts have focused on developing basic principles and communicating them to the field and to the public. The pragmatic need to plan and sustain programs superseded academic efforts to define quality. There have been only limited opportunities for leaders in the field to come together for this purpose. The field has also been in a stage of experimentation and exploration regarding what family support means; it has not been ready to define quality. Yet the need for specifying quality in family support is crucial. Without a definition and standards of quality for programs, it is difficult to encourage and guide new programs, train workers for the field, frame policy to safeguard quality, and evaluate quality (Kagan, 1994).

Recently, however, the Family Resource Coalition's Best Practice Project has convened a national constituency of practitioners, academicians, and leaders in the field to define what constitutes excellence in family support practice. The volume, *Guidelines for Family Support Practice* (Family Resource Coalition, 1996) discusses guidelines for implementing family support principles, giving examples of best practices from the field. The question is not whether good practice exists—it certainly does. Rather, the challenge is to capitalize on what we know and to make this information accessible as the movement grows and family support programs spread across the nation (Kagan, 1994).

A second and related issue in family support is professionalization. Some are concerned that if family support—always a grassroots movement—becomes overly professionalized, it will lose the very vitality, responsiveness, and inclusiveness that distinguishes family support from conventional social services. Another school of thought suggests that without professionalization, the movement will not mature to its potential or garner recognition and autonomy for its workers. Irrespective of which stance is advocated, how such professionalization would unfold is being considered. According to conventional approaches to professionalization, to become a profession family support would need to define a body of knowledge, discern the content of training, and determine stan-

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dards for credentialing its workers (Kagan & Weissbourd, 1994). Not necessarily under the rubric of professionalization, many of these efforts are currently under way. The clear challenge is for these efforts to continue without losing the field's unique commitment to inclusiveness and diversity.

Clearly, family support as an active movement has outpaced family support as a purely analytic endeavor; nowhere is this more apparent than in the data on program effectiveness. Indeed, it has been noted specifically that family support program expansion has outpaced research on its implementation and effectiveness (Powell, 1994). Fueled in part by the need for programs, there are several important methodological considerations that have impeded the rapid evolution of evaluative data. In part, this is due to the lack of availability of valid and reliable measures. But this is not the sole or primary reason for the slow evaluation pace. Indeed, research methodology is not highly advanced because family support programs are very difficult to evaluate. Programs, and therefore sample sizes, are often very small, and because each program differs, research designs must be tailored to the particular program. Random assignment is often impossible due to ethical, political, and logistical reasons; quasi-experimental designs with lower reliability and validity are used instead. Staff are rightly concerned that most evaluation tools do not capture all the effects of programs on families, especially family functioning. Similarly, economic assessment is still in early stages of development.

Evaluating family support programs remains an urgent, but complicated, task. Yet there are some promising evaluation efforts (see Powell, 1994). For example, some involve participants and program staff in the evaluation process. Others describe program implementation and identify the contributions of program and population characteristics to program outcomes. There has been growing interest in context; research questions have been refined to include data that can be used for improving program design. In addition, the national evaluation of family support programs has used the theories of change approach, which suggests that there is an implicit theory that every person brings to the table about what is to be changed in programs or in communities. The approach asks practitioners and parents to identify their short- and long-range goals (usually in terms of specific outcomes), activities that they feel lead to these outcomes, and how this change is expected to occur. The

benefit of a theories of change approach is that it enables the clear specification of activities and desired outcomes. In making change processes quite explicit, the approach serves as a guide for practitioners and researchers as they coconstruct the evaluation design. Despite these challenges that family support must confront in the coming years, the family support movement represents an important asset to the nation as it considers readying children for their futures. Few other efforts so honor families while providing them with the support and resources to carry out their parenting responsibilities effectively.

Implementing Readiness: The Role of Early Care and Education

Early care and education services also play an essential role in enabling children to succeed in school. Such settings can expose children to opportunities for social, cognitive, emotional, and physical development. Despite this possibility and despite the reality that 98% of all children actually have some form of out-of-home services before first grade, American early care and education is as fraught with problems as it is with possibilities. Several are discussed below, with their implications for implementing readiness.

The Quality Imperative and the Quality Problem

Quality early care and education prepares children for later educational achievement. Recent studies have linked quality early care and education to the healthy cognitive, social, and emotional development of all young children (Cost, Quality, and Child Outcomes Study Team, 1995) and in particular to low-income children's later social and cognitive functioning (Barnett, 1995; Gomby, Larner, Stevenson, Lewit, & Behrman, 1995; Phillips, 1995; Schweinhart, Barnes, & Weikart, 1993; Yoshikawa, 1995). Children who develop reasoning and problem-solving skills within a quality early care and education environment are likely to be more cooperative and considerate of others and to have more self-esteem. Many of these positive effects may linger and contribute to children's increased cognitive abilities, positive classroom learning

behavior, long-term school success, and even improved likelihood of long-term social and economic self-sufficiency (Gomby et al., 1995; Poersch, Adams, & Sandfort, 1994; Schweinhart et al., 1993). Children attending lower-quality programs, in contrast, are more likely to encounter difficulties with language and social development and less likely to have mastered age-appropriate behaviors or expected levels of development (Whitebook, Howes, & Phillips, 1989).

In spite of this child development research, quality early care and education is scant. The recent Cost, Quality, and Child Outcomes four-state study found that 86% of child care centers provided mediocre- to poor-quality care (Cost, Quality, and Child Outcomes Study Team, 1995). The United States also faces a quality crisis in family child care. Another recent study found that 16% of regulated family child care homes and up to 50% of unregulated homes offered substandard care (Galinsky, Howes, Kontos, & Shinn, 1994).

The quality crisis in early care and education has many roots. Historically, the care and education of young children has been considered the primary responsibility of the family and, therefore, outside the realm of government. Public and private institutions only intervened when families failed or were deemed deficient. This deficit approach continues today. Treated as necessary evils of a humane society, the American public funds many social services—including early care and education—with reluctance. It is therefore not surprising that such targeted programs carry with them great stigma and low funding levels. In contrast, financial support and government intervention in early care and education for nonpoor families has only taken place during periods of crisis, such as during World War II or the Great Depression. With the end of the crisis, public support and financial backing for universal early care and education has quickly waned. Unlike support for the public school system, early care and education for all children has never held a prominent place on the U.S. social agenda.

Social ambivalence toward motherhood has also contributed to the low levels of commitment to a quality early care and education system. Instead of viewing early care and education as an important opportunity for children's learning, the United States has resisted policies and programs that appear to intervene in any way with family life and motherhood. Indeed, many Americans continue to

believe that out-of-home care is harmful, despite evidence to the contrary (Gomby et al., 1995; Hayes, Palmer, & Zaslow, 1990; National Institute of Child Health and Human Development, 1996; Phillips & Howes, 1987). Additionally, Americans dismiss the care of young children as mindless, custodial work, devaluing the contributions of stay-at-home mothers. Although the public continues to uphold national policies that lead to nonparental care for more and more young children, it stops short of calling for policies to protect its youngest citizens from harm and promote their development while in out-of-home care. Such attitudinal ambivalence has manifested itself in ambivalence in early care and education policy, leaving support for early care and education open to recurrent debate and inconsistent investment of resources.

The Access Imperative and the Access Problem

If the United States expects all children to start school ready to learn, universal access to quality early care and education services must be a national priority. Although more than 13 million children from birth to age 5 in the United States attend early care and education programs on a regular basis (U.S. Department of Education, National Center for Education Statistics, 1995), consistent quality services are far from universal. Unlike education, which is an entitlement for all children, early care and education enrollment is not equally distributed throughout the population. Low-income children are much less likely to attend early care and education programs than their higher-income peers (U.S. General Accounting Office, 1993). Only 50% of children living in households with incomes of $10,000 or less regularly attend early care and education, compared to more than 75% of children in households with incomes in excess of $75,000 (U.S. Department of Education, National Center for Education Statistics, 1995).

Looking at preschool enrollment in 1990, only 33% of poor and near-poor 3- and 4-year-olds participated in preschools compared to 45% of the nonpoor population. The highest participation rates—60%—were among children with annual family incomes above $63,370 for a family of four (U.S. General Accounting Office, 1993). Minority children—Hispanic preschoolers in particular—are less likely than other children to have early childhood program experience before beginning school (West, Hausken, &

Collins, 1993). The U.S. General Accounting Office found that children from immigrant families or linguistically isolated households, families where parents did not work, families where parents had not completed high school, and single-parent families had substantially lower rates of preschool participation than other children. Furthermore, poor or near-poor children in these groups—those most in need of quality early care and education services to support their development and learning—had the lowest rates of preschool participation (U.S. General Accounting Office, 1993).

Even within Head Start, the nation's primary federal program to prepare poor children to start school ready to learn, access is limited. Head Start reaches a fraction of those eligible, and those served by Head Start are not representative of poor families in general (Hofferth, 1995). More broadly, there is growing concern that Head Start, because it is predominantly composed of part-day programs, may be inaccessible to single parents who are struggling to combine child rearing and work (Hofferth, 1995).

Access to early care and education services appears to be particularly low for working-poor and blue-collar families who neither qualify for subsidies nor can afford child care fees (Phillips, Voran, Kisker, Howes, & Whitebook, 1994; Whitebook et al., 1989). Findings from these studies suggest that race and income determine whether children will begin school with quality early care and education experiences to ready them for school success.

Indeed, when disadvantaged children do have access to early care and education, they often do not receive quality services. The General Accounting Office found that more than half—59%—of the disadvantaged children who do attend preschool are in programs that may not provide the full range of child development, health, and parent services that are needed to optimize school readiness (U.S. General Accounting Office, 1995a). The children who would benefit the most from quality early care and education programs are the least likely to be attending them.

The Infrastructure Problem

Accessible quality early care and education programs cannot be achieved in isolation; they must be part of a quality system. To date, the early care and education field has focused on promoting direct

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services, the programs that touch the lives of children and families day to day. However, a system depends on essential functions that act behind the scenes to support direct services—the infrastructure. Scholars have identified five key elements to the essential functions of the infrastructure: parent information and engagement; professional development; facility licensing, enforcement, and accreditation; funding and financing; and government and planning. As with any system of services, quality early care and education will function effectively only when all the components work together.

In each component of the infrastructure, scattered reform efforts are now under way, and some progress has been made. However, what resembles an infrastructure is fragmented and reform efforts are too few and far between to support consistent quality programs across the country. The lack of commitment to the development of an infrastructure is made even more complicated by the lack of coordination in direct service programs themselves. Programs emerge episodically and inconsistently, emanating from different legislative mandates, funding streams, regulatory systems, and administrative agencies. Some programs fall under the jurisdiction of state departments of education, others are overseen by departments of health, and still others by departments of welfare or social services (Kagan, Goffin, Golub, & Pritchard, 1995). A recent study documented 90 different federal programs sitting in 11 federal agencies and 20 offices (U.S. General Accounting Office, 1995b). Equally inconsistent, state-supported programs vary from state to state and even within states. Given attitudinal ambivalence toward early care and education generally and the confusion of an uncoordinated set of programs specifically, it is not surprising that little attention has been given to the development of an early care and education infrastructure.

The Financial Problem

For all children to have access to quality early care and education programs, the system must be adequately funded. Children of all incomes, races, and needs do better in higher-quality programs than in lower-quality programs, and these programs cost somewhat more (Cost, Quality, and Child Outcomes Study Team, 1995). Furthermore, the components of the infrastructure to support a quality system discussed earlier also depend on adequate funding. Thus,

current underinvestment in early care and education prevents a quality early care and education system from developing and prevents children across the United States from obtaining needed services.

Inadequate public funding burdens parents with the majority of the costs of early care and education and contributes to inequitable service delivery. Roughly 80% of all early care and education costs are absorbed by families, with the remaining 20% distributed among the government (via program and consumer subsidies), foundations, and corporations. Families with lower incomes bear a larger burden of the early care and education expense—and receive lower-quality services in return. A national study found that employed mothers with incomes under $15,000 spent about 25% of their income on early care and education (averaging $63 per week), whereas those with an annual family income of $50,000 or more spent 6% of their income on early care and education programs for their young children (averaging $85 per week) (Hofferth, Brayfield, Deich, & Holcomb, 1991). Those families who cannot afford the full cost of early care and education must rely on the small stream of public subsidies to enroll their children in programs. However, in five of six states surveyed in a 1994 study, parents were on waiting lists for subsidies to purchase early care and education, but these subsidies were not forthcoming because of limited funding (U.S. General Accounting Office, 1994). Limited subsidies constrain parents' early care and education choices. Without financial assistance, lower-income parents are often forced to settle with lower-quality care for their children.

Low public investment in early care and education also jeopardizes children by forcing programs to operate with inadequate funds to provide quality. Whereas the average of $5,800 that governments spend per child on a year of public school pays for just 30 hours of education a week for about 40 weeks a year, the combined parent and government spending of $3,000 to $5,000 per child for a year of full-time early care and education pays for 35 to 50 hours of early care and education per week for 50 to 52 weeks per year (Casper, 1995; Cost, Quality, and Child Outcomes Study Team, 1995; Hofferth et al., 1991; Sugarman, 1995). Early care and education workers subsidize the underfunded system with their low wages. Consequently, the field struggles to retain and nurture a well-qualified workforce as staff turnover remains high. Given the

relatively large number of hours paid for by the relatively small investment in early care and education compared to school, it should not be surprising that the quality of early care and education is so low. As with families, early care and education needs support to fulfill its responsibility for readying children for school success.

Implementing Readiness: The Role of Schools

Children begin school with a range of experiences and backgrounds. Teachers face the challenge of meeting the needs of children who are both demographically and developmentally diverse. A recent study found that of 4-year-olds, 9 out of 10 could button their own clothes and hold a pencil properly, and 7 out of 10 could identify primary colors by name. However, only 6 out of 10 could count to 20 and recognize the letters of the alphabet (Zill, Collins, & Hausken, 1995). The sociodemographic risk factors that children bring with them to kindergarten have been found to correlate with accomplishments and difficulties across developmental domains. Specifically, researchers have identified five family risk factors that negatively affect a child's development (Zill et al., 1995): mothers with less than a high school education; families below the poverty line; mothers who are non-English-language dominant; mothers who were unmarried at the time of the child's birth; and single-parent families. In general, children with more risk factors are more likely to experience more developmental difficulties and fewer accomplishments, even after controlling for other child and family characteristics. This is a serious finding given that half of all preschoolers are affected by at least one risk factor, and 15% by three or more. Furthermore, these risk factors are associated with children's learning difficulties after they enter school. As a recent study notes, "While there has always been variation in children entering kindergarten, the commitment to meeting the educational and developmental needs of *all* children in an increasingly diverse society presents greater challenges to teachers and schools" (Zill et al., 1995, p. viii). In the classroom, teachers face the delicate balance of promoting the development of children with early literacy and numeracy while encouraging basic skills in children without them.

Accommodating the differing needs of young students is not an easy charge. It requires teachers with warmth, sensitivity, and patience as well as with adequate training and resources. Kindergartens have taken various approaches to promote early school success and reduce the risk of school failure. The first (and less favored) approach expects children to be ready for schools by structuring homogeneous kindergartens for a heterogeneous population. The second approach—flexible programs to meet the needs of demographically diverse students—gives schools the responsibility of being ready for children.

Entrance Age and Extra-Year Programs

Favoring a maturationist view that older children may be more developmentally ready to learn and succeed in school, schools and parents have called for raising the entrance age to kindergarten (see Powell, 1995). In addition, some parents—especially middle-class and wealthy parents—choose to keep their children out of school an extra year and enroll them at age 6 rather than the traditional age 5 (Goal One Ready Schools Resource Group, 1995). These parents fear pushing their children beyond their developmental level (Graue, 1993a) and hope that an extra year of social, cognitive, and physical maturation will prime them for kindergarten success (Goal One Ready Schools Resource Group, 1995). Children of lower-income parents who may not be able to afford quality early care and education programs for an additional year may be disadvantaged by such redshirting. On the other hand, holding children out of kindergarten may not even be effective. Research shows that within kindergarten classrooms, younger children do receive slightly lower scores on standardized tests through at least first grade (Sheehan, Cryan, Wiechel, & Bandy-Hedden, 1991; Shepard & Smith, 1986). However, by third grade differences in test performance between older and younger children disappear (Shepard & Smith, 1986).

Programs that give children the "gift of time" gained popularity in the 1980s (Powell, 1995). Developmental or junior kindergartens aim to give children considered developmentally immature 2 years of formal schooling before entering first grade. The first year resembles a preschool program, and the second is similar to traditional kindergarten. Transitional first grade enrolls children who

have completed kindergarten but are deemed unready for first grade. Children may also be retained for an additional year of regular kindergarten. Although these extra-year programs try to reduce the risk of school failure, studies have found this approach to be ineffective in the long term (Graue, 1993b; Gredler, 1992; Karweit & Wasik, 1994; Meisels, 1992; Shepard, 1989).

Not only do these approaches have limited long-term success, but they place the burden on children to be ready for school. Separating "unready" children from their peers may hurt their self-esteem by making them feel different or that they are being punished (Bredekamp & Shepard, 1988). More important, if schools were committed to accommodating the variation among children's development and competencies, there would be no reason to hold back children (Goal One Ready Schools Resource Group, 1995). Indeed, all schools need to ready themselves for all children, regardless of children's apparent developmental readiness.

Transitions and Developmentally Appropriate Schools

The transition to formal schooling is a huge change for children and their families. All families can benefit from support during this period as their children leave the comfort of home or an early care and education setting for schools. Children learn and develop better if they experience continuity between the time periods and spheres of their lives. Children who do not make successful transitions may be less successful in school, have difficulties making friends, and may be vulnerable to mental health and adjustment problems (Goal One Ready Schools Resource Group, 1995). Facilitating transitions so that children and families adjust to the new learning environment is a crucial part of sharing the responsibility for preparing children for school success. It requires interaction among homes, schools, early care and education programs, and communities. Unfortunately, research suggests that this support is not widespread.

Instead of placing the burden on the child to demonstrate readiness, schools can accept that children will arrive in their classroom with varying levels of development. Schools can ready themselves for children by adopting developmentally appropriate practices—including flexible program structures and curricula—that accommodate children's age and individual differences. For example,

some schools have experimented with multiage grouping that enables teachers to account for the range of competencies among students and within an individual child. Multiage grouping allows children to learn from each other and reduces same-age peer comparisons that can make children feel inadequate (Katz, Evangelou, & Hartman, 1990). Holistic, integrated instruction, not didactic teaching such as worksheets and drill and practice, optimizes children's early school experiences. Developmentally appropriate curriculum emphasizes the whole child. Active learning flows from the child's interest. Children participate in concrete activities that are relevant to their young lives, and subject matter is integrated throughout children's work (Boyer, 1991; Bredekamp, 1987; Goal One Ready Schools Resource Group, 1995; National Association of State Boards of Education, 1991).

Children make easier transitions to formal schooling through opportunities to visit and familiarize themselves with the new classroom. However, nationally representative samples of schools and school districts in the National Transition Study found that less than half of schools had formal programs for school visitation by parents (Love, Logue, Trudeau, & Thayer, 1992). Schools can establish continuity between families and institutions by supporting parents as their children's first teachers. Teachers and schools must recognize that language, values, behavioral codes, and expectations may differ between children's homes or early care and education programs and the school, making it difficult for children to adjust without efforts to make them feel comfortable and supported. Attention to and respect for this diversity—during parent-teacher meetings and in teacher-child classroom interactions—are an essential part of developmentally appropriate practice.

Unfortunately, research suggests that developmentally appropriate or "ready" schools are not widespread. One statewide study found that only 20% of randomly selected kindergartens met the criterion of developmental appropriateness (Bryant, Clifford, & Peisner, 1991). The implementation of developmentally appropriate practices may be inhibited by different attitudes and beliefs held by teachers and parents. In determining whether a child is ready for kindergarten, parents emphasize social and emotional maturity (Eisenhart & Graue, 1990). However, compared to kindergarten teachers, parents stress academic skills and favor classroom practices that are more academically oriented (Knudsen-Lindauer & Harris, 1989). A U.S. Department of Education study found that parents were six to eight times more likely than teachers to rate counting to 20 and knowing the alphabet and three times more likely to rate the ability to use pencil and paintbrushes as very important or essential for kindergarten readiness (West et al., 1993).

Parents and teachers need to come together to discuss their goals and beliefs about readiness. Because both teachers and parents play a large role in preparing children for school success, their disparate goals may have far-reaching effects on children's development and learning. As Knudsen-Lindauer and Harris (1989) suggest, the closer parents' and teachers' attitudes and expectations are, the easier it is for them to work together to facilitate children's successful transitions to kindergarten and promote their school success.

Fortunately, teachers are enthusiastic about involving parents to improve children's early school success. A recent survey found that 64% of more than 7,000 kindergarten teachers surveyed indicated that parent education is the most important goal to pursue in addressing school readiness (Boyer, 1991). Parents can and should be treated as partners in their children's education and should be allowed to take strong decision-making roles in schools.

This section has focused on a vertical transition—that which occurs as children move up from one grade or class to the next. However, children also experience horizontal transitions, those which occur during a given day as children move from one caretaking/educational setting to another (Kagan, 1991; Zigler & Kagan, 1982). For some children, this may entail moving from home to care by a grandparent to half-day Head Start to child care back to the grandparent and then home. As discussed earlier, young children are increasingly in nonfamilial care settings—sometimes many different care situations per day. Kindergarten programs that are developmentally appropriate build on what children have learned in preschools and through other early childhood experiences. Communication between preschool and kindergarten teachers can help ensure compatible program philosophies. However, nationally representative samples of schools and school districts found that in only 10% of schools did regular communication occur between kindergarten teachers and previous caregivers or teachers about the entering kindergarten children. Only 12% of schools had curricula that build on preschool programs (Love et al., 1992).

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Children with disabilities are faced with another kind of horizontal transition—the transition from special services to mainstream classrooms. Just as there is a need to link child care and school settings, there is often the need to link within school settings around the needs of particular children. Finally, schools need to establish linkages with neighborhoods, communities, and community institutions. These relationships should be infused in school structure and curricula. Teachers need to be able to draw on resources beyond the classroom for help and support. Tutors, health professionals, and technology specialists should be available for children and families. Working with social service and health agencies, making referrals and following up on them, schools can enhance the lives of children and their families. Schools should maintain contact with community-based institutions—those that offer before-school, after-school, or weekend programs for young children and their families. In addition, by collaborating with cultural institutions such as libraries and museums, schools can create a community of learners (Goal One Ready Schools Resource Group, 1995).

Readying children to succeed in school commands serious attention by families, schools, and communities to all of these transitions. In a climate of block grants and diminishing resources, collaboration, communication, and service integration among the different parties and institutions that touch the lives of children and families is a social imperative.

Assessment

Schools that are ready for young children understand the need for and the dilemmas surrounding assessment. It is true that readiness assessment can help gauge how well families, institutions, and communities are preparing children for success in school. Collecting data around readiness can garner attention and focus support around early childhood issues. Assessment can drive policy and allow the field to create better, more appropriate instruments. It can lead to better observations of child behavior and give the nation information on how well it is fulfilling its commitment to children.

However, young children are notoriously difficult to assess. Traditional paper-and-pencil tests are inappropriate for very young children, who are restless test takers with very short attention spans. Furthermore, young children's growth is rapid and episodic;

test results only report children's performance at one given point in time and therefore are not useful for generalizations about further growth and development. Meisels (1988, 1989) has noted that few valid and reliable assessment instruments have been developed, and other scholars have been rightly concerned about how the results of tests will be used (National Association for the Education of Young Children, 1988). A California study of standardized testing to sort children in and out of programs and classify them for retention or promotion found that boys were retained more often than girls, and children with English as a second language were more likely to be retained than those whose home language was English (Agee & California State Department of Education, 1988). Such methods segregate children—often based on the results of a single test—and challenge commitments to educational equity.

The NEGP has proposed the development of an early childhood assessment system that would achieve some of the goals of assessment without compromising the well-being of young children at the earliest stage of their education. The proposed system would be grounded in several principles to ensure that it would not jeopardize, label, or stigmatize individual children. First, the assessment system would respect the diversity among children and families—linguistically, culturally, and racially. Second, it would shift from collecting information on any given child to collecting social indicator data—data on children and communities. Third, the system would not resemble traditional tests but would assess using teacher input, parent input, and children's work samples, for example, block constructions, scribble stories, dictation. As a result of this assessment system, teachers would be better observers; parents would be involved in the assessment process; and national, solid empirically based data would be available to policymakers. Finally, such a system would shift the readiness burden from children to communities and schools.

Policy Recommendations

As our discussion indicates, readying children for school success is a complex and challenging task that must be shared by many stakeholders. No longer the burden of individual children, the

major individuals and institutions that touch the lives of our youngest citizens—families, early care and education, schools—must come together to define and implement readiness.

Healthy People 2000 recognized the importance of the early years to children's school and later success. One of its services and protection objectives called for access to quality early care and education for all disadvantaged children and children with disabilities to prepare them for school and increase their prospects for school performance, problem behaviors, and mental and physical health (U.S. Department of Health and Human Services, Public Health Service, 1991). Yet early care and education is just one critical component to prepare children for school success. Although important, this objective alone is not sufficient to implement readiness for *all* children. *Healthy People 2010* has an opportunity to focus more attention on the critical needs of young children by setting more, specific objectives that support readiness. The following recommendations build on the information presented earlier and offer concrete policy steps for the future. We urge the *Healthy People 2010* report to consider including these recommendations in the laudable effort to promote the health and well-being of our children, our families, our institutions, and our society.

1. Consistent with the Healthy People 2000 preventive orientation, give more attention to children and the importance of the early years before school.

Americans must recognize their social obligation to support policy and practice that promote young children's early development and learning. More research on children's early brain development is needed; the findings from studies must be circulated widely—in layperson's language—to parents, early childhood educators, and policymakers. Working with the media and others, we should make these players aware of what they can do to support children's healthy growth and development, including their early literacy and numeracy. With increased public attention to the link between children's early experiences and their later functioning, families, early care and education, and schools will be more likely to recognize and accept their responsibility to ready children for school success.

2. Conceptualize readiness as children's readiness, family readiness, school readiness, and community readiness.

Defining readiness has plagued the early childhood field for years. Now, with the NEGP's conception of children's early development and learning, the field finally has a widely accepted definition. More research is needed on each of the five dimensions, and funding should be made available to support this. In addition, efforts should be made to ensure that the five dimensions are understood as influenced by families, schools, and communities. It is no longer appropriate to place the burden for children's readiness on children alone. It is a responsibility that must be dispersed and shared more widely.

3. Generate adequate assessment systems for children, schools, and communities.

Serious attention to defining readiness opens the door for more substantive work on assessment. Clearly, steps have been taken toward inventive assessments strategies—including portfolio development, the work sampling system—that can be used diagnostically and can be used to improve pedagogy and instruction. Far more work is needed to assess children for accountability purposes in ways that consider young children's learning and assessment styles. Furthermore, work needs to be done to conjure appropriate mechanisms to hold the nation accountable for what it is doing to promote school readiness. We need to establish mechanisms for evaluating schools' readiness for children and communities' readiness for supporting young children.

4. Consider children and families holistically.

Early care and education, family support, and health services need to be more closely aligned in terms of goals/principles and service delivery. The early care and education and family support movements are linked conceptually; both adhere to similar principles. Both movements acknowledge that the responsibility for education transcends formal schooling. As a result, quality programs promote the education and development of young children before they begin school. In addition, both early care and

education and family support uphold universal and equitable service delivery as essential to promoting early development and learning for all children.

However, although these conceptual commonalities exist between early care and education and family support, few practical links connect the two movements. In part, this results from the fact that the two movements have reached different stages of development. Although early care and education services in the United States remain fragmented and highly idiosyncratic, there is still a more advanced infrastructure and more secure funding streams for early care and education than for family support. Family support needs to create an accepted definition of quality, a professionalized workforce, and advanced evaluation methodology. Most important, the two movements must forge operational links with one another to assure a holistic orientation to the development of young children.

In addition to linking family support and early care and education, far more work needs to be done to infuse health and health services into the development of ready children and ready communities. Given the increasingly vulnerable health status of America's children and the proven correlations between health and development, universal access to comprehensive screening and appropriate health services must be part of a national focus on readiness. In short, children's services can no longer be envisioned as categorical efforts that work to "fix" health, education, or family services. Rather, adopting a preventive and holistic orientation, one that regards readiness as a collective national effort, is required if we are to have a nation composed of healthy children and healthy families.

Finally, a quality early care and education infrastructure is needed to support quality programs that promote children's health and development. Comprehensive programs devoted to meeting children's needs across domains would acknowledge the strengths of individual children and their cultural and developmental differences. Attention would focus on easing children's transitions as they move from caregiver to caregiver and from early care and education to formal schooling. A quality infrastructure would include a system for licensing facilities and individuals who work with young children so that they are protected from harm. Governance structures at the state and local levels would hold the system

accountable. Parents would have access to the information they need to be effective consumers of early care and education services. Employers and programs would support parents to be engaged as partners in their children's early care and education experiences. Finally, the system would be adequately funded with the financial burden shared among government, parents, employers, and the public at large.

Taken together, these recommendations are not simple; they represent a tall order. Yet for America to stand tall, it can no longer beg the issue of the importance of the early years. The time for action is now and *Healthy People 2010* represents one promising path for action.

Note

1. The term *early care and education* is used by the field to connote all nonparental care for young children, including those services that take place in centers and family child care homes. Early care and education includes nonprofit and for-profit child care, Head Start and other comprehensive development programs, Title I and other school-based prekindergarten programs, and part-day nursery schools. Home-based programs include family child care.

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